

**It began with a hand-written letter from a member of Trout Unlimited.**

**The letter refers to the proposal to apply limestone sand to the headwaters of Rausch Creek in Lebanon County, Pennsylvania, to mitigate the acidic effects of drainage from the old coal mines.**

**At first glance the project would appear to be virtuous.**

**But appearances can be deceiving. In this case the devil was in the details.**

MR. HARRY ZIRLIN  
DEBEVOISE + PLIMPTON LLP  
919 THIRD AVENUE  
NEW YORK, NEW YORK  
10022

SUBJECT:

FORT INDIANTOWN GAP - NATIONAL GUARD  
TRAINING CENTER; ANNVILLE, PENNSYLVANIA,  
AND THE STONY CREEK WILD + SCENIC RIVER  
AREA, STATE GAME LANDS #211.

DEAR MR. ZIRLIN:

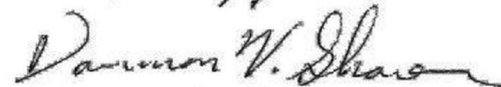
WE HAVE MET BACK IN 2008 AT A MEETING  
WITH MR. JIM RICE CONCERNING FTIG- NETC AND  
STONY CREEK VALLEY.

IT HAS COME TO MY ATTENTION THAT FTIG  
HAS ENTERED INTO AN AGREEMENT, TO CONDUCT  
HELICOPTER TRAINING EXERCISES, INTO STONY  
CREEK VALLEY, ALONG WITH TROUT UNLIMITED,  
AND THE PA. GAME COMMISSION. THEY WOULD BE  
TRANSPORTING LARGE CONTAINERS OF LIMESTONE  
SAND TO THE HEADWATERS OF RAUSCH CREEK  
BY HELICOPTER, AND ARE CALLING IT A TRAINING  
EXERCISE. THIS IS RIGHT ALONG THE APPALACHIAN  
HIKING TRAIL. THIS SHALL CREATE NOT  
ONLY LARGE AMOUNTS OF NOISE, BUT GREAT  
DANGER TO PEOPLE; IN THE WILDERNESS WE  
HAVE BEEN FIGHTING SO HARD TO PROTECT  
FROM SUCH INVASION.

I THOUGHT YOU WOULD LIKE TO KNOW,  
AND WOULD WELCOME ANY HELP OR INSIGHT  
ON THIS MATTER.

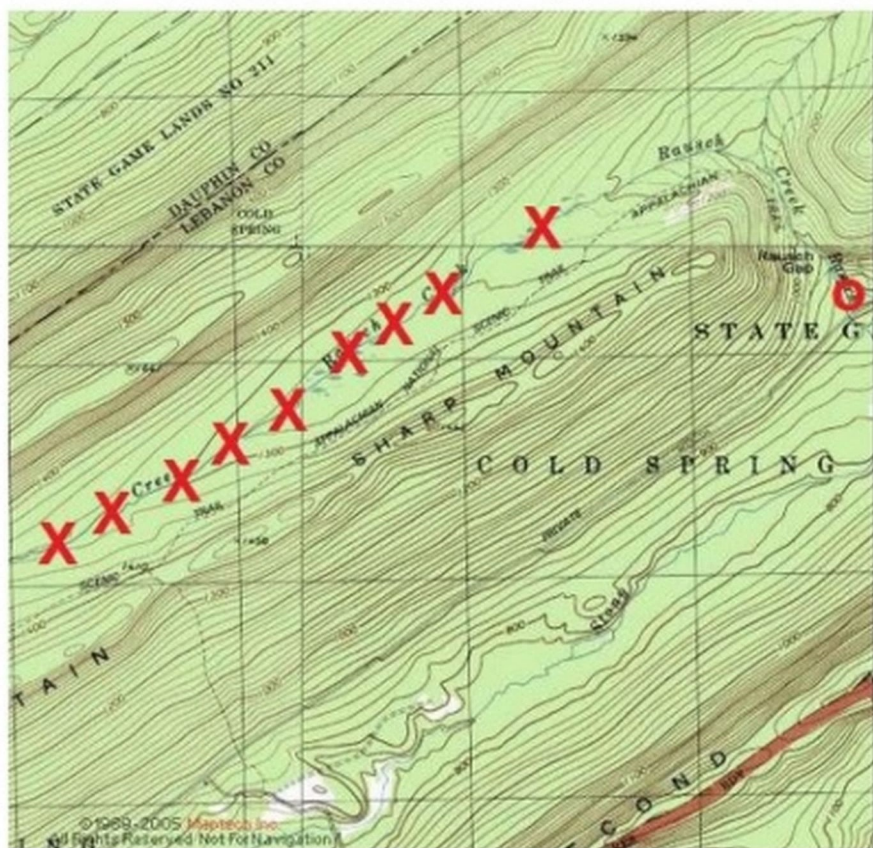
THANK YOU FOR YOUR TIME!

VERY TRULY YOURS,

  
DORMAN V. SHAVER

FEBRUARY 22, 2010  
DORMAN V. SHAVER  
P.O. BOX 54  
MYERSTOWN, PA.  
17067-0054





**X** Potential Sand Drop Locations  
(Approximately two miles along the Appalachian Trail)

**O** Existing Diversion Wells

The Trout Unlimited (TU) chapter constructed two limestone diversion wells (LDWs), the first in 1987 and another in 2000, on the Rausch Creek tributary of Stony Creek. These wells reduce the acid mine drainage (AMD) from the old coal workings and permit holdover and wild trout populations to exist into the lower reaches of Stony Creek. The existing LDWs work admirably.

Utilizing volunteers to mitigate AMD is indeed a noble gesture. There was adequate weekly manpower. The limestone and its delivery were free.

Yet someone decided to fix something that was not broken.

The plan proposed cutting trees and removing brush at nine different sites in the forest. National Guard helicopters would carry limestone sand to these cleared drop sites. The TU chapter would cut and clear paths for ATVs from the Appalachian Trail to each drop site.

This is Pittman-Robertson land supposedly protected by Pennsylvania law since 1980. There are no public roads in this wilderness area. A Pennsylvania Game Commission access road (former railroad bed) tracks through Stony Creek Valley. Public use of this access road is by bicycle, horseback or "shoe leather." A visitor to Stony Creek Valley must hike or bike to any destination.

That is precisely what makes this area so special.



# Sample of Email Exchange

**March 14, 2010**

I just talked at length with Dorm Shaver regarding the proposed limestone dosing of the Rausch Creek tributaries --he told me you are the man to contact.

Where can I obtain a copy of the plans for the construction of this passive system of acid remediation? --with all the details?

I am more than willing to pay for any reproduction costs.

**March 14, 2010**

I am passing on your request to the Board President of the Doc Fritchey Chapter of Trout Unlimited. Dorm asked me for this information this morning and he is an active member of Trout Unlimited, so I am aware of his interest in this project. I'm curious, are you making this request as an interested individual or you making this request representing a group or organization?

Are you representing this environmental network and what is the name of this network? You are requesting me to get you information and I am willing to make that request, but I need to explain who is asking and the purpose of that request.

**March 19, 2010**

Our consultant just advised me that the report documents will not be completed until early next week. Just as soon as I have them in hand I will let you know the cost and where you can pick up. Thank you for your patience.

**March 26, 2020**

While the Rausch Creek AMD Passive Treatment Project report is now complete, our consultant has advised that it should not be distributed until such time as we have met with PADEP and PADCNr to review and obtain their approvals in accordance with the conditions of our two grants. In the meantime, if you wish I would be glad to meet with you to answer any specific questions you might have regarding our proposal. We can assure you that DFTU has nothing to hide; we're just following proper protocol. Thank you for your understanding.

**March 26, 2010**

I respectfully asked to review the plans for the limestone dosing of the headwaters of Rausch Creek.

As a stakeholder in preserving the wilderness aspect of Stony Creek Valley, I thought my request was reasonable.

Label the document as a "draft" or "incomplete" and release it for public scrutiny.

Why is Mr. Shaver so passionately opposed to your plans?

Why are you so afraid of public scrutiny?

I am more than willing to pickup the consultant's report and pay for it --consider it a donation to DFTU.

**April 29, 2010**

At our regular meeting alst evening, the board of DFTU unanimously approved the project at Rausch Creek. I understand that you desire to see the document, and it is avaiilable, and DEP has signed off. It is still being reviewed by DCNR. If you want a copy, please call [REDACTED], and he will supply it.

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**RAUSCH CREEK ASSESSMENT REPORT OF FIELD  
RESULTS AND REMEDIAL OPTIONS  
LEBANON COUNTY, PENNSYLVANIA**

*Prepared for:*

**Doc Fritchey – Trout Unlimited  
P.O. Box 6592  
Harrisburg, PA 17112**

**It began with a hand-written letter  
from a member of Trout Unlimited.  
Others expressed displeasure with the plans,  
but not as fervently as Mr. Shaver.**

**This report has been modified  
to illustrate the preferred alternative.**

March 26, 2010

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## Site Information

Rausch Creek, a tributary to Stony Creek, is located in Lebanon County and has a contributing watershed area of 3.96 square miles. The Rausch Creek watershed is located within the northern portion of Lebanon County, Pennsylvania, which lies within the Ridge and Valley Physiographic province (**Sheet 1**). The Ridge and Valley province is a distinguished belt of long, narrow wooded ridges and broad agricultural valleys that sweep diagonally through central Pennsylvania. The ridges are similar in structure and elevation, typically rising between 800 to 1,600 feet above sea level (amsl). The project area is located in the Appalachian Mountain Section. The bedrock consists of sandstone, shale, and conglomerate formations. Low-grade anthracite coal has been mined from the Pottsville Group (USDA, 1991 and The Nature Conservancy, 2003) in the project area. The associated abandoned mines represent a significant non-point source of pollution to Rausch Creek and Stony Creek watersheds.

Evidence of abandoned mines within or adjacent to the project area includes eight mine spoil piles and seven field-identified acid mine drainage (AMD) seeps. The AMD discharge to Rausch Creek lowers the pH of the stream resulting in an acidic system, which impairs water quality, aquatic habitat, and biodiversity. In 1987, the Doc Fritchey Chapter of Trout Unlimited (DFTU) installed the first of two limestone diversion wells on Rausch Creek at the location shown on **Sheet 2**. The initial diversion well was installed to neutralize the acidic flow from Rausch Creek before entering Stony Creek. Photos of these and other site features are included in **Appendix A**. In 2000, a second limestone diversion well was installed to handle flow related to high water events. The resulting pH readings are typically around 4.0 standard units (s.u.) upstream of the wells and 6.0 s.u. downstream of the wells, enabling for year-round survival of both brook and brown trout. *Pennsylvania Code, Title 25 (Environmental Protection), Chapter 93 (Water Quality Standards)* notes Stony Creek, to which Rausch Creek is a named tributary, as having a designated water use of High Quality Waters – Cold Water Fishes (HQ-CWF). This designation is for the, “maintenance or propagation, or both, of fish species including the family *Salmonidae* (i.e., trout) and additional flora and fauna which are indigenous to a cold water habitat” (Commonwealth of Pennsylvania, 2009).

The project area is represented on the plan sheets, and is situated entirely within lands owned by the Pennsylvania Game Commission (PAGC) which are also designated as part of the State Game Lands (SGL) No. 211. In addition, the Appalachian Trail (AT) follows Rausch Creek as shown on **Sheet 2**. The Appalachian Trail Conservancy (ATC) has an easement through the project area. Both PAGC and ATC have provided letters of support for this project.

## **Purpose**

The limestone diversion wells are currently serving their purpose by increasing the downstream pH in the lower reach of Rausch Creek and upper Stony Creek. However, the wells are material and maintenance-intensive. DFTU currently relies on donated supplies (limestone for the diversion wells) and volunteer trucking to deliver materials to the Site. In addition, maintenance is entirely a labor-intensive volunteer effort. DFTU desires to reduce these components as well as extend treatment upstream to promote additional water quality improvements to create a sustainable upstream macroinvertebrate and trout population to the extent practical. The waters upstream of the Rausch Creek diversion wells are very difficult to access by large vehicles and/or construction equipment, so the preferred treatment is a passive system that requires little maintenance after installation. This report provides the results of sampling and flow measurements that provide the basis for identification of feasible passive treatment system alternatives, and presents each alternative. Finally, the preferred alternative system specific to the conditions and capable of accomplishing the project goals at Rausch Creek is presented.

## **Funding**

This project is funded by DFTU (\$24,500) with an additional cash donation from Mr. James D. Novinger (\$5,000). Grants from the Pennsylvania Department of Conservation and Natural Resources (PADCNR) in the amount of \$20,100, Pennsylvania Department of Environmental Protection (PADEP) Growing Greener (\$25,000), and the Pennsylvania Department of Community & Economic Development (PADCED) (\$14,500 pending), bring the current total project funding to \$89,100. Additionally, local non-cash grant matches equaling \$13,750 in cash, services, and materials, have been donated, including \$1,350 in administrative services by DFTU, and Pennsy Supply, Inc. committed to donate \$3,000 of limestone with a 20% discount on limestone. PAGC donated \$2,700 in services as they provided an aquatic macroinvertebrate survey. Pennsylvania Fish and Boat Commission (PFBC) donated \$3,500 to complete a fish survey. The Eastern Pennsylvania Coalition for Abandoned Mine Reclamation (EPCAMR) provided \$200 in geographic information system (GIS) and mapping services.



## Discussion of Results

The analytical results for pH, DO, acidity, alkalinity, aluminum, iron, and manganese were averaged using the analytical results from the seven sampling events (**Table 3**). The average estimated flow was then used to calculate the annual loading for aluminum, iron, and manganese.

The geology of the project area and the anthropogenic activities associated with coal mining, have had an impact on the water quality of Rausch Creek. As discussed above, the bedrock in the project area is primarily sandstone, shale, and conglomerate formations, consequently there is little or no buffering of acidic influences (i.e., AMD and acid precipitation) on the stream's water quality. The sampling of AMD discharge sites (AMD-2 through AMD-6) associated with the remnant coal mining/abandoned mine land (AML) features has illustrated that these sites' primary water quality issue is a depressed pH. Generally speaking, the sampling locations water quality has low acidity, alkalinity, and metals (Al, Fe, and Mn).

Also, seven of the 11 sampled site's average DO concentration meet or exceed the USEPA minimum limit (5 mg/l) adequate for fish survival (Bain and Stevenson, 1999). Provided that additional alkalinity can be incorporated into the watershed (system wide), then the stream's pH can be increased by increasing the buffering capacity, thus reducing the dissolved aluminum concentrations. Results from the sampling on Rausch Creek indicate all sample points averaged between 3.6 and 4.9 pH. A moderately buffered Rausch Creek would have an alkalinity of 25-75 mg/L and a highly buffered stream would have >75 mg/L. Currently all of the stream water samples averaged <10 mg/L of alkalinity and the dissolved aluminum concentrations ranged from 0.2 mg/L to 0.4 mg/L. This is important because PFBC's *Management of Trout Fisheries in Pennsylvania Waters* (1997) states,

*For catchable trout a pH of 5.7 s.u. will be considered as the critical value for management action. Short term fluctuations between pH 5.7 s.u. and 6.0 s.u. will be acceptable for practical purposes under spring discharge conditions. A pH value less than 5.7 s.u. for extended periods will require management action. Options include: a) stocking only brook trout, b) in-season-only stocking, c) reduction of in-season frequency and/or allocation, and d) termination of stocking. If pH fluctuates between 5.7 s.u. and 6.0 s.u. and total dissolved aluminum is between 0.1 mg/L and 0.2 mg/L, stocking of brook trout only should be considered. If pH does not exceed 5.7 s.u. and total dissolved aluminum is greater than 0.2 mg/l, catchable trout management should be discontinued.*

Thus, if the water quality parameters discussed above (i.e., pH, alkalinity, and dissolved Al) can be improved through the development and operation of additional treatment, then it is likely that Rausch Creek can support a year-round fishery, and that upstream extension of these conditions is possible.

## **Alternatives Analysis**

Some of the key considerations in evaluating the potential alternatives to achieve project objectives include the chemical effectiveness to increase pH and alkalinity, and reduce metals concentrations to allow for year-round habitat development for trout, ability to construct the treatment option within a very topographically and access-restrictive area, minimization of impacts to sensitive resources within the project area, including the Appalachian Trail, minimization of capital costs, and long-term operation and maintenance costs. Following preliminary evaluations completed as part of the application process for the PADEP Growing Greener Grant, essentially three alternatives were considered further. There are derivations and combinations of each that could be considered, but for the purpose of this analysis, three options were considered individually; no-build (i.e. continue the LDW operation as currently), in-stream high-calcium lime sand treatment, and in-stream and off-line oxic limestone bed construction.

While each of the possible build alternatives meet the needs of the project in one form or another, the In-Stream Limestone Sands Addition Alternative meets all aspects, requires the least design and permitting, and is the lowest cost, and therefore has been designated the preferred alternative for the project.

### **In-Stream Limestone Sands Addition Alternative**

The In-Stream Limestone Sands Addition Alternative is considered the most viable treatment option to achieve all stated goals for treatment of Rausch Creek for several reasons in addition to those associated with improving water quality (primarily improving alkalinity and thus the stream's buffering capacity). In 1980 Stony Creek and its associated tributaries that include Rausch Creek were designated by the PGC as *Wild*. Additionally, Rausch Creek is located within PAGC State Game Lands #211 and the St. Anthony's Wilderness. Therefore, PAGC may look more favorably on in-stream limestone sands treatment due to its relatively low impact to the surrounding landscape in comparison to other alternatives.

**Treatment Application** - Limestone sand is placed directly into the streambed in high gradient headwater drainages. The general premise of this treatment alternative is that the limestone sand dissolves into the associated stream mainly during high flow events. The limestone sand should be a Grade A agricultural limestone with high  $\text{CaCO}_3$  content.

The ability of the proposed treatment system to improve Rausch Creek will be dependent upon how well DFTU and its volunteers can maintain these facilities, along with the LDWs.



This treatment option has been proven successful in similar watersheds with limited buffering capacity, combined with AMD and acid rain influences. This option is also attractive for Rausch Creek due to the remoteness and terrain limitations on access to construction vehicles, as would be required for all other treatment options. The Pennsylvania Army National Guard (PANG) from Fort Indiantown Gap (FTIG) has agreed to provide helicopter support to transport the required limestone sand to the treatment locations. This allows for treatment upstream into the upper watershed areas, particularly the West Branch. Based upon the project goals and the loadings calculated, URS has determined that approximately 20 tons of high-calcium sand meeting the specifications provided in this report can effectively be delivered to each treatment site (Sheet 4). URS, along with PAGC and DFTU field-verified each location, which were chosen based upon the required treatment density, and for ease of air drop (minimal vegetation requiring clearing). Each site will require some minimum vegetation clearing, consisting mainly of brush and small trees. Once cleared, these materials will be used to create habitat near each site for birds and small game.

Each treatment site will initially receive a single delivery of an estimated two-years' worth of treatment (approximately 20 tons/site). The high-calcium sand will be delivered to FTIG by Pennsy Supply, and will be loaded into carrying vessels specific for this application. Carrying vessels are specified with adequate strength for air transport to the treatment sites, and are capable of complete containment of the sand, so that the rotors of the helicopter are protected from airborne sand. Treatment will continue in this manner and adjustments may be made to frequency of delivery and volume required based upon monitoring to be conducted during the first year of application. At each treatment site, sand will be stockpiled adjacent to the stream, and will require distribution to the streambed within each treatment reach at a rate of approximately 2 to 3 tons quarterly for the first year. Monitoring will include monthly measurement of the remaining stockpile volume, and field-measured water quality. The results of monitoring will be continually assessed and the field program adjusted accordingly to determine the best application frequency and volume.

**Sheet 4** identifies the locations to receive limestone sand treatment based primarily on the accessibility of these locations, and the distribution pattern necessary to achieve treatment. From there, small rubber-tired all-terrain or manual delivery equipment will be used to transport treatment applications throughout each treatment reach (approximately 50 feet upstream and downstream of each drop location) within the project area. The sand will then be manually distributed to the stream.

Permitting requirements for this alternative are minimal, and mainly require coordination and since the project is being completed on PAGC lands and there is no construction required, can be permitted by PAGC with written application and this plan.

June 11, 2010

Anthony R. Conte, Regional Solicitor  
U.S. Department of the Interior  
One Gateway Center - Suite 612  
Newton, MA 02458-2881

**Stony Creek Valley and use of Pennsylvania Army National Guard  
Helicopters to Transport Limestone Sand  
into Wild Pennsylvania Game Commission Land**

Dear Mr. Conte:

This firm represents No-Net-Loss, a non-profit organization working to preserve Stony Creek Valley. We write to you on a matter of considerable concern to my client and others dedicated to the preservation of Stony Creek Valley—the potential transportation of limestone sand at regular intervals to specified locations inside Pennsylvania Game Commission Land by helicopters of the Pennsylvania National Guard at Fort Indiantown Gap, as part of a project for Doc Fritchey Chapter of Trout Unlimited (“DFTU”). (See Rausch Creek Assessment Report of Field Results and Remedial Options (“Rausch Creek Assessment”) at 8-9, Ex. 1 to this Letter). The project is receiving funding from the Pennsylvania Department of Environment Protection, which receives funds from the U.S. Department of the Interior. To our client’s knowledge, this project has not been evaluated under the National Environmental Policy Act (NEPA) and thus such involvement by the Pennsylvania Army National Guard and Pennsylvania Department of Environment Protection violates the law.

The land in question is located in the southeast region of Pennsylvania in Lebanon County, is designated as wild State Game Lands 211 (SGL 211) by the Pennsylvania Game Commission (“PGC”), and is located in the Appalachian Mountain Section and St. Anthony’s Wilderness. Portions of SGL 211 were purchased using federal funds granted under the Pittman-Robertson Act, also know as the Federal Aid in Wildlife Restoration Act. (Agreement ¶ 5, Ex. 2 to this Letter.)

Use of helicopters to transport limestone sand at regular intervals into PGC lands is guaranteed to have a significant impact on the environment. It will seriously disrupt the wilderness characteristics of the environment and substantially affect the quality of the hiking (including on the Appalachian Trail) and hunting lands that were previously only accessible by foot. NEPA requires federal agencies to integrate environmental values into their decision making by considering the environmental impacts of their proposed actions and reasonable alternatives to those actions through the preparation of an Environmental Assessment (EA) or an Environmental Impact Statement (EIS), if necessary. To date, no EA, much less an EIS, has not been completed for this project. Indeed, the Rausch Creek Assessment specifically mentions that “permitting requirements” for the preferred alternative are minimal and does not mention preparation of an EA or EIS. (See Rausch Creek Assessment at 9, Ex. 1).

We ask that your office promptly review the attached Rausch Creek Assessment and require that the Pennsylvania National Guard at Fort Indiantown Gap conduct an EA under NEPA and, if necessary, prepare an EIS prior to allowing any Pennsylvania National Guard helicopter activity inside Pennsylvania Game Commission Land.

Thank you for your time and consideration. We would appreciate receiving an update on your agency’s progress in evaluating the Rausch Creek Assessment. Please do not hesitate to contact me at (212) 909-6575 or [hzirlin@debevoise.com](mailto:hzirlin@debevoise.com).

Very truly yours,

Harry Zirlin  
Bethany A. Davis Noll



**For decades the Pennsylvania Game Commission has permitted helicopter training in State Game Land No. 211.**

**A landing area identified as Landing Zone 'Mary' is open all year for day and night operations – even during the hunting seasons. This landing zone exists in the food plot atop Third Mountain.**

**Aircraft landing in other areas during hunting season is not permitted and should be reported immediately.**

**Christopher D. Latchford,  
Colonel, Pennsylvania Army National Guard,  
State Army Aviation Officer  
to  
Honorable Jeffrey Piccola,  
Senate of Pennsylvania, 15<sup>th</sup> District,  
dated September 9, 2003**

**Colonel Latchford states, “our concerns for safety and the right of sportsmen are always at the forefront of our training requirements.”**

**Dubbed a training mission, the helicopter transportation of heavy containers of sand along the Appalachian Trail, hovering near the trail until the sand is dropped is absurd.**

**The plan does not replace the existing LDWs. Not maintaining the wells would have a negative consequence for Stony Creek and the environment created by the Trout Unlimited chapter.**

**There are no public roads in this wilderness area.**

**That is precisely what makes this area so special.**